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What is claimed is:

1.　An image encoding method of compressing and encoding an input image frame, comprising:

dividing the input image frame into a plurality of blocks;

detecting a motion vector of each of the plurality of blocks;

5　classifying the plurality of blocks into one or more groups, according to one or two grouping method selected from motion vector based grouping based on the value of the detected motion vector and DC component based grouping based on DC components of brightness and color information of each block;

calculating a first weighting coefficient of the one or more groups in a case where 10 the plurality of blocks are classified according to the motion vector based grouping, and calculating a second weighting coefficient of the one or more groups in a case where the plurality of blocks are classified according to the DC component based grouping; and

quantizing each of the plurality of blocks by a quantization step width determined based on the first or second weighting coefficient.

2.　The image encoding method according to claim 1, wherein

said detecting detects the motion vector by comparing each of the plurality of blocks with blocks included in a previously-input image frame.

3.　The image encoding method according to claim 1, wherein:

in a case where the motion vector is detected, said classifying classifies the plurality of blocks according to the motion vector based grouping, and said quantizing quantizes each of the plurality of blocks by the quantization step width determined based on the first 5 weighting coefficient;

in a case where the motion vector is not detected, said classifying classifies the plurality of blocks according to DC component based grouping, and said quantizing quantizes each of the plurality of blocks by the quantization step width determined based on the second weighting coefficient.

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4. The image encoding method according to claim 1, wherein, in a case where the motion vector is detected:

said classifying classifies the plurality of blocks according to motion vector based grouping and the DC component based grouping; and

5 said quantizing quantizes each of the plurality of blocks by the quantization step width determined based on both the first and second weighting coefficients.

5. The image encoding method according to claim 1, wherein

said weighting coefficient calculating calculates the first weighting coefficient based on number of blocks included in each of the one or more groups classified according to motion vector based grouping.

6. The image encoding method according to claim 1, wherein

said weighting coefficient calculating calculates the second weighting coefficient based on a distance between center of each of the plurality of blocks, included in each group of the one or more groups classified according to DC component based grouping, 5 and center of the input image frame.

7. The image encoding method according to claim 1, wherein

said classifying classifies the plurality of blocks into groups according to each of said motion vector based grouping and said DC component based grouping, in such a way that each of the groups forms a continuous portion of the input image frame.

8. The image encoding method according to claim 1, further comprising

re-calculating a weighting coefficient, using the first and second weighting coefficients calculated at said calculating and each of a plurality of previous weighting coefficients, and

5 wherein said quantizing quantizes each of the plurality of blocks based on the re-calculated weighting coefficient.

9. The image encoding method according to claim 1, further comprising:

encoding data of the motion vector detected at said detecting and data representing

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each of the plurality of blocks quantized at said quantizing into a variable-length code;

storing the data variable-length encoded at said encoding in a transmission buffer;

5 and

checking an amount of data stored in the transmission buffer, and

wherein said quantizing quantizes each of the plurality of blocks by a quantization step width determined, based on the data amount checked at said checking and the first or second weighting coefficient in accordance with the classification of the blocks.

10.   An image encoder which compresses and encodes an input image frame, said image encoder comprising:

a frame divide circuit which divides the input image frame into a plurality of blocks;

a motion prediction circuit which detects a motion vector of each of the plurality of 5 blocks;

an interframe prediction circuit which generates differential data in the plurality of blocks based on the motion vector detected by said motion prediction circuit;

an orthogonal transformation circuit which performs discrete cosine transformation for the differential data generated by said interframe prediction circuit, and calculates DC 10 components of brightness and color information of each of the plurality of blocks;

a weighting section which calculates a quantization step width for use in quantizing resultant data of the discrete cosine transformation performed by said orthogonal transformation circuit, based on the motion vector detected by said motion prediction circuit and the DC components calculated by said orthogonal transformation circuit; and

15   a quantization circuit which quantizes the resultant data of the discrete cosine transformation performed by said orthogonal transformation circuit, by the quantization step width calculated by said weighting section.

11.   The image encoder according to claim 10, wherein:

said weighting section includes

a motion vector based grouping section which classifies the plurality of